The Bulletins are published weekly throughout the school year (thirty issues) to aid teachers and students in keeping abreast of geography behind current news events.

GEOGRAPHIC SCHOOL BULLETINS

of

The National Geographic Society

WASHINGTON 6, D. C.

The National Geographic Society is a non-profit educational and scientific Society established for the increase of geographic knowledge and its popular diffusion.

VOLUME XXV — November 11, 1946 — NO. 6

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ROBERT A. BARTLETT

WELL-TO-DO ESKIMO WOMEN TAKE THE SUN OUTSIDE THEIR GREENLAND HOME

The one seated looks as though she went to Paris or New York for her hair-do. The house, built of stone, brush, driftwood, skins, and tar paper, has glass windows, and is a warm, permanent dwelling. About 20,000 Greenlanders live on the world's largest island (page 5).

Russia Gets "No" on Turkish Straits Plan

FOR the second time, Turkey has turned down a Russian proposal for joint control of the Dardanelles. The Soviet Union, whose southern ports are connected to the outside world by the strategic strait, wants to establish a base there. The recent exchange of notes keeps alive a problem that goes back to legendary times of ancient Greece.

The snakelike Dardanelles Strait (Canakkale Bogazi) and Bosporus Strait (Karadeniz Bogazi), with their connecting link, the Marmara Sea (Marmara Denizi), form a 172-mile waterway between the Mediterranean and Black seas. Also they make a barrier between the portions of Turkey in Europe and in Asia.

Outbound Ships Thread Bosporus First

Through this narrow gap, the grain, oil, and tobacco of the Black Sea ports find their only outlet. Largest holder of Black Sea coast line is the Soviet Union, with more than a thousand miles. Turkey has about 800 miles, and Romania and Bulgaria together some 400 miles.

Traffic from the Black Sea passes first through Bosporus Strait, the narrowest, shortest, and often roughest stretch of the trip. Framed by medieval castles and red-roofed villages, this 20-mile bottleneck in places is less than half a mile wide.

On the European side, as the strait broadens into the Sea of Marmara, stands Istanbul, old Constantinople (illustration, page 4), which for sixteen centuries has felt the crosscurrents of human tides of migration, conquest, and trade.

Beyond the Marmara Sea, the lane narrows again at the Dardanelles Strait, the swirling, wind-swept southern corridor whose name is sometimes popularly used for the entire passage. About 40 miles long, its shores are less than a mile apart where Leander swam to visit Hero, and where Lord Byron and others took the plunge to prove the old romantic legend possible. Old Greek name for the strait was Hellespont.

Turks Have Held Straits for 500 Years

History has often used the straits-and-Marmara route as a highway. The issue of its control is believed to have been a factor in the Trojan War. This conflict, a dozen centuries before Christ, is described in the *Iliad* of Homer.

The power of the Byzantine Empire was rooted in the strong position of Constantinople beside the Bosporus.

For the past 500 years, the Turks have held the straits. Before Russian influence reached the shores of the Black Sea in the 18th century, Turkey not only guarded the passage but excluded non-Turkish shipping from the sea.

Later, when general international interests began to be recognized, innumerable agreements were made for the straits' use. This waterway played an important role in the Crimean War. Its control was the goal of

ENTERED AS SECOND-CLASS MATTER APRIL 27, 1943, POST OFFICE, WASHINGTON, D. C., UNDER ACT OF MARCH 3, 1879.
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SCREEN TRAVELER FROM GENDREAU

SUMATRA'S HIGH-GABLED, HORN-DECORATED BATAK HOMES HAVE SOOTY, INSECT-RIDDEN, CAVELIKE INTERIORS

The inside is one large room, usually inhabited by several families. Except near the fireplace, mats cover the floor. There is no furniture. Humpbacked pigs scavenge in the streets. About a million Bataks live on the island of Sumatra (page 5).

Ten Largest Islands Are Relatively Small

WHAT are the world's ten largest islands? How large are they, and to what sovereignties do they belong?

All land on the globe is surrounded by water, hence, according to the definition every schoolboy knows, the biggest islands should be the greatest land masses. But a classification line has been drawn, separating Australia and Greenland and making the former the world's smallest continent and the latter the globe's largest island. The "down-under" land is three and one-half times as large as up-north Greenland, but this difference is often obscured by popular Mercator maps.

All Islands Total Less than U. S. and Alaska

Excepting the six continents (in order of size: Eurasia, Africa, North America, South America, Antarctica, and Australia), the world's land is comparatively scarce. The continents cover a little more than one-fourth of the earth's surface. The myriad islands cover less than one-fiftieth. The globe is 71 per cent oceans, 29 per cent land.

All the islands in the world (there are 7,083 in the Philippines group alone) have less area than the United States plus Alaska. They total not a great deal more land than Australia, Canada, or Brazil.

The ten largest islands and their areas in square miles are:

Name	*Area*	*Political Affiliation*
1. Greenland	827,300	Denmark
2. New Guinea	316,861	Netherlands—Great Britain—Australia
3. Borneo	290,012	Netherlands—Great Britain
4. Madagascar	228,642	France
5. Baffin	197,754	Canada
6. Sumatra	167,620	Netherlands
7. Honshu	89,009	Japan (Main Island)
8. Great Britain	84,186	Great Britain
9. Victoria	80,340	Canada
10. Ellesmere	77,392	Canada

These ten bodies of land cover two-thirds of the world's islanded area, but only one-eightieth of the total surface of the globe. They add up to about as much land surface as the 27 states west and north of the line of the Ohio and lower Mississippi rivers.

Most important of the ten are Great Britain and Honshu. Separated by the "double continent" of Eurasia, they are the only two wholly within the North Temperate Zone, where man thrives best. Each, thickly populated, is about the size of Minnesota. Great Britain holds London, and the rest of England, Scotland (illustration, page 6), and Wales. Honshu, main island of Japan's four, holds Tokyo and Osaka.

Small Denmark Owns Largest Island

Three of the ten—Borneo, New Guinea, and Sumatra—are steaming equatorial tracts of the East Indian archipelago, lying north and northwest of Australia in the double line of islands between the Pacific and Indian oceans. The region is important for rubber, petroleum, tin, and spices. Sumatra (illustration, inside cover), a Netherlands possession, compares in size with California. Borneo and New Guinea, shared between the empires of Netherlands and Britain, are each larger than Texas.

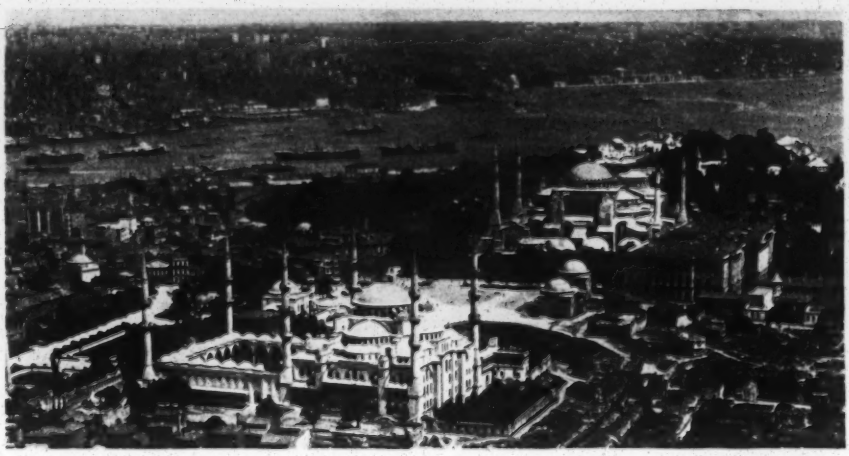
of the disastrous Gallipoli campaign of the British during World War I. Opened to Allied ships late in World War II, it provided a supply short cut to the Soviet Union.

Turkey, as a defeated power in World War I, temporarily lost the right to fortify the area. In 1936, however, an international agreement drawn up at Montreux, Switzerland—now being considered for revision—permitted Turkey to resume military control of the straits. It also provided various regulations for international shipping, commercial and naval, in time of war or peace.

NOTE: The Dardanelles, the Bosporus, and the Sea of Marmara may be located on the National Geographic Society's Map of Europe and the Near East. A price list of maps may be obtained from the Society's headquarters, Washington 6, D. C.

For further information, see "American Alma Maters in the Near East," in the *National Geographic Magazine* for August, 1945; "Turkish Republic Comes of Age," May, 1945; "Alert Anatolia," April, 1944; "On the Turks' Russian Frontier," September, 1941; and "Looking in on New Turkey," April, 1932*. (*Issues marked with an asterisk are included in a special list of Magazines available to teachers in packets of ten for $1.00.*)

See also "Dardanelles, Turkish Water Gate, Key to Southern Soviet Ports," in the GEOGRAPHIC SCHOOL BULLETINS, February 12, 1945.



MAYNARD OWEN WILLIAMS

SHIPS OF THE WEST ANCHOR NEAR MOSQUES OF THE EAST IN ISTANBUL'S ANCIENT PORT

On the Golden Horn where it joins the Bosporus (right), the steamers rest after threading one of the two narrow straits leading to the Turkish city. In the foreground stands the mosque of Sultan Ahmed. Behind it looms Sancta Sophia, crowning glory of the Moslem world, built in the sixth century as a Christian church by the Emperor Justinian.

NATIONAL GEOGRAPHIC MAPS NOW IN GREATLY ENLARGED SIZE

Beginning a new educational service, the National Geographic Society has published in greatly enlarged form three of its most-requested maps—The United States, The World, and Northern and Southern Hemispheres.

Large enough to be clearly visible from any point in a classroom, the United States map measures 67 by 43½ inches—more than 5½ by 3½ feet. The world map is the same size, while the hemispheres map is slightly smaller—67 by 35½ inches.

These enlargements are based on the smaller maps in the Society's regular series of 10-color charts which are familiar supplements to the *National Geographic Magazine*. They not only retain the coloration and scrupulous accuracy of the supplement maps, but considerably enhance clarity, so distinctive of all the Society's charts. They are obtainable only at the Society's headquarters, at $2.00 each.

Great Smokies, Roof Top of Eastern America

THE Great Smoky Mountains National Park is an infant among the national playgrounds of the United States, yet, even for several years before its dedication in 1940, it was one of the most popular. In a recent ten-month span, nearly 800,000 visitors from every state and from many foreign countries entered the park.

One reason for the popularity of the area is its geographic location. Straddling the Tennessee-North Carolina state line for 54 miles, it is within two days by rail from such large cities as St. Louis, Chicago, Detroit, Cleveland, Pittsburgh, New York, Philadelphia, Baltimore, Washington, Richmond, Atlanta, Birmingham, and New Orleans.

Clingmans Dome Second-Highest Peak East of Mississippi

The park's spectacular wilderness heights form the roof top of eastern America. Sixteen peaks in the park area rise more than 6,000 feet. Fifty-six miles of highways and 675 miles of horse and foot trails lead to cathedral-like forest areas that include 200,000 acres of virgin forest, and to secluded communities where self-sufficient mountaineers (illustration, page 8) live much the same as did their Revolutionary ancestors. Six hundred miles of clear, well-stocked streams lure the angler.

The park covers more than 400,000 acres. Clingmans Dome (6,642 feet), the highest peak, is second in height among peaks of eastern America to Mt. Mitchell in the near-by Black Mountains of North Carolina. The latter tops the Dome by only 42 feet.

Before the park area was opened to traffic, the mountains were a barrier between eastern Tennessee and western North Carolina. Establishment of the park, through the generosity of the adjoining states and individuals, turned this area from a barrier into a goal.

From the Tennessee side, motorists begin the climb of the mountains at Gatlinburg, a tiny hamlet twenty years ago but now a bustling resort town. For fifteen miles through dense forests and along the banks of a plunging stream, the highway climbs to the state line at Newfound Gap, and drops into North Carolina. It leaves the park at the Qualla Reservation, home area of 3,000 Cherokee Indians, where, each October, spectators inspect handiwork displays and witness tribal games.

Mother Nature's Paint Pot Colors Smokies Every Fall

At Newfound Gap a six-mile highway follows closely the crest line in a southwesterly direction to Clingmans Dome. This is the highest motor road east of the Mississippi. Frequent lookouts afford striking views of the mountains and valleys in both states, but the most spectacular panorama spreads before the visitor at the Dome where on clear days in summer one sees green mountains rising and tumbling in all directions.

In autumn the greens change to gaudy reds of the maples, sourwoods, and black gums; the rich golds of the birches, beeches, tulip poplars, hickories, basswoods, and the few remaining chestnuts; and the russets of the oaks, suggesting that Mother Nature, unable to decide upon a fall color

Greenland (illustration, cover) lies in chilly Arctic and North Atlantic waters northeast of the United States and Canada. Three times as big as Texas, it is tiny Denmark's only colony. Almost covered with ice, Greenland has small villages along the coastal fringe of land.

Grouped together west of Greenland around the region of the North Magnetic Pole are three other islands of the world's ten largest. They are Baffin, Victoria, and Ellesmere (map, page 10), all Canadian, all frigid, drab, and barren except for limited tundra and plains areas that support caribou and musk ox. Victoria and Ellesmere are Nebraska-size. Baffin would cover three-fourths of Texas.

Madagascar is the only island of the ten that reaches as far south as the South Temperate Zone. Nearly as large as Texas, it lies in the Indian Ocean near Africa's southeast coast. This tropical haunt of strange plants and animals has been a French colony for 50 years.

NOTE: For a true relative comparison of these islands, refer to the Society's Map of the Northern and Southern Hemispheres.

For additional information, see "Americans Stand Guard in Greenland," in the *National Geographic Magazine* for October, 1946; "Bonnie Scotland, Postwar Style," May, 1946; "The Face of the Netherlands Indies" (20 photographs), February, 1946; "Unknown Japan," August, 1942*; "Madagascar: Mystery Island," June, 1942*; "Unknown New Guinea," March, 1941*; "Britain Just Before the Storm," August, 1940*; and "Canada's Awakening North," June, 1936*.

B. ANTHONY STEWART

INVERURIE'S MAIN STREET BECOMES A SHEEPWAY AS SCOT SHEPHERDS MOVE TO THE HIGHLANDS

Explorers Push Back Arctic's Icy Curtain

THE remote and forbidding North Polar regions are getting closer and closer. Recent flights over the ice-filled seas have revised popular ideas of distance and geographic placement of the Northern Hemisphere's continents. Seattle is closer to the North Pole than it is to Miami, and New York is considerably nearer the pole than to London.

True-scale maps of the North (see page 10) show that the Arctic Ocean is the air age's Mediterranean (middle of the land) Sea. Shortest routes between most North American points and points in Europe and Asia usually cut the Arctic Circle. The *Pacusan Dreamboat*, flying between Hawaii and Egypt, passed over these far-north regions.

Captain Foxe Mixed Humor and Place Names

A less publicized Canadian air expedition recently rediscovered the Spicer Islands, just north of the Arctic Circle in Canada's Foxe Basin. This exploit stirred memories of the days when Arctic exploring, done on the surface, was a matter of inching through ice floes that might at any moment lock a ship in jaws of death.

The English navigator, Luke Foxe, the early explorer for whom Foxe Basin and Foxe Channel were named, retained a sense of humor in spite of his perilous calling. He sailed from England in 1631 on one of the many expeditions sent out in the 16th and 17th centuries to find a northern short cut to the trade and riches of the East. Exploring the waters of Hudson Bay and the channels north of it, he not only showed exceptional navigation skill but left a trail of tongue-in-cheek place names.

"Cape Wolstenholme's Ultimum Vale," Foxe explained, was so called because he believed "Sir John Wolstenholme will not lay out any more monies in search of this bay." History upheld the title.

In asserting English possession of the lands he visited, Captain Foxe paid his respects to his "dread soveraign, Charles the First, King of Great Brittaine," in such names as "King Charles his Promontory," "The Prince his Cradle," and "The Prince his Nurse." He called one group of islands "Brigges his Mathematickes," and his own turning point along Foxe Channel "North-west Foxe, His Furthest."

Northwest Passage Search Still Goes On

Foxe apparently did not penetrate as far as the Spicer Islands. These islands were not reported until 1879, when Captain Spicer of the old whaling port of New Bedford, Massachusetts, described them as low-lying reefs. Although they were marked on charts, other navigators in the waters did not see them, and some doubted their existence.

Other doughty explorers, most of them looking for the elusive northwest passage, left their autographs on the maps of north Canada—Hudson, Baffin, Davis, James, Frobisher. Five United States Navy ships recently made history by maneuvering in these same far-north waters. The small fleet threaded all but the westernmost leg of the northwest passage.

Two of the ships were icebreakers, one a seaplane tender, and two cargo vessels. Employing new techniques, the expedition sent the planes ahead to scout breaks in the ice and to direct the icebreakers in crashing

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pattern, emptied her paint pots playfully over the mountainsides.

Most of the park has been left almost entirely in its natural state. Only modern foot and bridle trails and a few deserted cabins of mountain families indicate the touch of man. One of the foot trails, following the state line along the crest, forms a scenic link in the rugged 2,000-mile Appalachian Trail that meanders from Maine to Georgia.

The Smokies have been called a botanist's paradise. There are more than 147 species of trees—129 native and 18 others. Visitors find wild flowers that grow abundantly in their home fields and woodlands among others that are rare to them. More than twenty orchids and violets find a natural habitat in these rugged and well-watered mountains; there are some 50 kinds of lilies, and five of magnolias.

Upwards of 1,200 species of plants, shrubs, and flowering trees blossom before the first day of June. In late June and July the white and purple blossoms of the rhododendron blanket whole mountains.

The park has no accommodations, but towns at either entrance have many hotels, cabins, and eating places.

NOTE: The Great Smoky Mountains National Park is shown on the Society's Map of the United States.

See also, "Rambling Around the Roof of Eastern America," in the *National Geographic Magazine* for August, 1936*; and "A Patriotic Pilgrimage to Eastern National Parks," June, 1934.

CARLOS C. CAMPBELL

RUNNERS ARE BETTER THAN WHEELS ON ROUGH TRAILS OF THE GREAT SMOKIES AREA

Land sleds are harder for ol' dobbin to pull, but they do not crowd his heels on downgrades. Scenes like this are numerous in the Appalachian highlands of North Carolina and Tennessee.

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Shellac and Jute Trade Centers at Calcutta

CALCUTTA, scene of recent riots between Hindu and Moslem, and haven for thousands of refugees from uprisings in eastern Bengal, was in more peaceful times the jute and shellac capital of the world. Largest city in Inda, Calcutta is also capital of Bengal Province.

Little does the average phonograph player realize that he owes his entertainment to an Oriental insect which manufactures shellac to surface his record. The American farmer, wrapping his grain, potatoes, and cotton in burlap, and his wife cleaning her jute-based linoleum, give scarcely a thought to the Indian who, halfway across the world, toiled knee-deep in Ganges mud to cut the jute that made these commonplace materials.

Lac Is a Living for Thousands of Bengalese

The base of shellac is lac. The word is derived from the Sanskrit *lakh*, meaning one hundred thousand. Lac is so named because great masses of rapidly multiplying insects feed on the banyan and other trees which grow in India, China, and Japan to produce this animal resin.

This insect—*Tachardia lacca*—by its activities in the Bengal forests, furnishes thousands of Bengalese with a living. The tree which the Tachardia picks as a base for operations is known as a "host." The insect sticks in its beak and sucks the sap. It exudes a resin which, accumulating, becomes its home and breeding place.

When thousands of these insects have covered a twig with resin, the lac collector cuts off the branch. This "stick lac" is scraped into sausage-shaped cloth bags which are twisted over a charcoal fire until the melting lac strains through. The resin congeals into flakes known as shell-lac—the shellac of commerce.

Bengal and adjoining Indian provinces, before the war, produced about 85 per cent of the world's shellac. China, Siam, French Indochina, and Burma were also sources.

Jute Is the Cheapest of All Fibers

The United States, which produces none, takes half the shellac that India exports. Besides surfacing phonograph records, it rust-proofs shells and military instruments. It is a valuable ingredient of polishes, varnishes, paints, plastics, adhesives, sealing wax, photographic materials, and preservative compositions for ships' bottoms. No substitute for all of shellac's uses is known, although for some of them synthetics have been developed.

Calcutta and its hinterland hold a world monopoly on jute. This coarse fiber—the cheapest fiber in the world—has brought billions to India. No country cared to compete with India's cheap jute labor. The United States, for instance, found in 1870 that jute could be grown in the Gulf states, but the southern farmer was unable to meet India's low prices.

In the Ganges-Brahmaputra delta, jute (illustration, page 12) grows ten to fifteen feet high. The stalks are cut, tied in bundles, and steeped in water for weeks. When fermentation has shredded the plant, the worker

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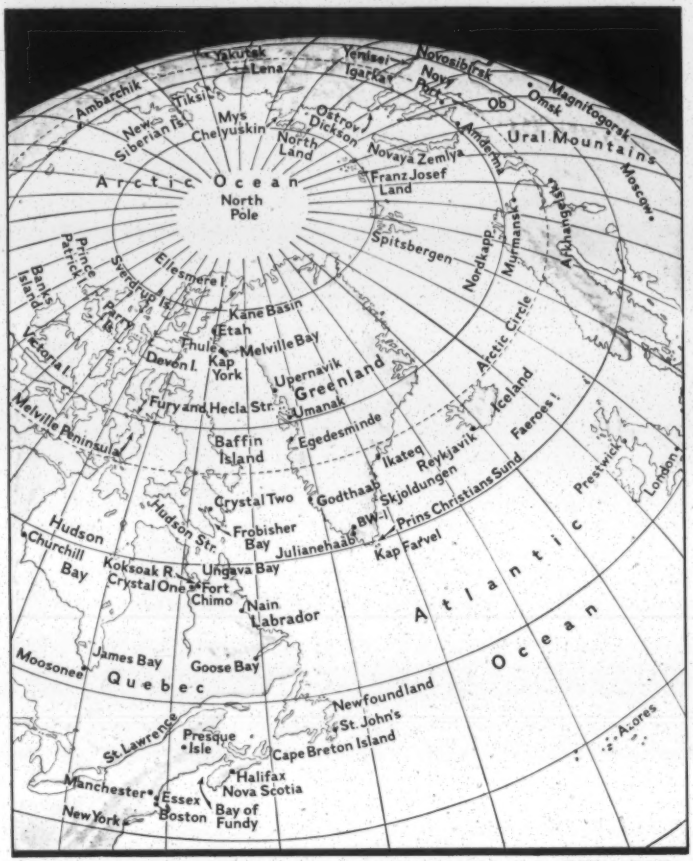
through to the nearest open water. This method combined the best features of surface and aerial exploration.

The northwest passage has been navigated only three times—by a single Canadian vessel. Best route seems to be through Davis Strait and Baffin Bay (between Greenland and Baffin Island, see map); west through Lancaster Sound, Barrow Strait, and Viscount Melville Sound (just south of Devon Island and the Parry Islands); then southwest through Prince of Wales Strait (between Banks Island and Victoria Island). The more southerly Fury and Hecla Strait has never been penetrated.

NOTE: The Polar regions are shown on the Society's Map of the World, and Map of the Northern and Southern Hemispheres.

For additional information, see "Servicing Arctic Bases," in the *National Geographic Magazine* for May, 1946; "Strategic Alaska Looks Ahead," September, 1942*; and "Flying Over the Arctic," November, 1925.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, January 7, 1946, "Canada Plans Short Water Route to Europe via Hudson Bay."



HARRY S. OLIVER

FROM 10,000 MILES UP, THE TOP OF THE WORLD LOOKS LIKE THIS

The body of water between Melville Peninsula and Baffin Island is Foxe Basin. Near its center rise the Spicer Islands, recently rediscovered. Greenland, Baffin, Great Britain, Victoria, and Ellesmere—five of the world's ten largest islands—appear on this map (see page 5).

beats the worthless pith from the fibrous inner bark. Then the fiber is dried and shipped to Calcutta for baling and manufacture.

Although jute occupied only about one and one-half per cent of India's cultivated land before the war, it constituted a fourth of the country's exports.

Stacks of a hundred jute mills line the Hooghly River at Calcutta. There are only about 15 in all the rest of India.

In 1940 India's jute crop was 12,262,450 bales (of 400 pounds). In that year Britain imported a billion jute sandbags to guard against German bombs, and ordered jute for camouflage cloth and other war uses.

Australia gets her grain sacks from India, and Chile her nitrate bags. The United States normally is Calcutta's best customer for woven jute, which is called burlap or hessian. Jute not only wraps American cotton bales and grain, but is used in upholstery, carpets, webbing, felting, calking, and insulation, and makes coarse ropes and twines.

NOTE: Regions where lac is produced may be located on the Society's Map of Asia and Adjacent Areas.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, November 8, 1943, "Jute, a Cinderella Fiber."

CUTTING AND TYING, BENGAL HARVESTERS READY JUTE FOR CALCUTTA MILLS

In the hot, marshy Ganges delta, harvest begins when the small, whitish-yellow blossoms of the jute plant begin to fade. Natives with sickles slice off the tall, slim wands—hollow, and about the diameter of a man's finger. If cut too early, the fiber is weak. If cut when the flowers have gone to seed, it is stronger but coarser, and has lost its luster. Planting starts in March and it is only three months from seed time to harvest in this humid region of eastern India.